Groin Hernias and Unmet Need for Surgery in Uganda

Epidemiology, mosquito nets and cost-effectiveness

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Akademisk avhandling

som med vederbörligt tillstånd av Rektor vid Umeå universitet för avläggande av medicine doktorsexamen framläggs till offentligt förvar i Hörsalen, Östersunds Sjukhus

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Abstract
Surgery has traditionally been considered more expensive than many other health care interventions in a global perspective. One of the reasons behind this misconception is that the effects of surgical conditions and their treatment have not been factored into the equation. An estimated 20 million herniorrhaphies are carried out annually but over 200 million people suffer from groin hernias. Herniorrhaphy is one of the most commonly performed surgical procedures also in Low and Middle Income Countries (LMIC). However, the surgical repair method is not the same due to financial constraints. In high income countries a synthetic mesh is used and has reduced the risk of recurrence. This mesh costs over 100 USD and is too costly for the majority in LMIC. Mosquito mesh, which is cheaper but very similar to commercial meshes, is used in several settings but outcomes need to be investigated more extensively.

Aims and methods: Three studies were carried out within the framework of this thesis. 1: A cross sectional study aiming to investigate the prevalence of groin hernia in adult males. 2: A facility based study with prospective data collection of all surgeries undertaken in two hospitals. 3: A double blinded, randomised controlled trial comparing the outcomes of using a mosquito mesh relative using a commercial mesh in groin hernia surgery.

Results 1: The prevalence of untreated groin hernia among the study participants was 6.6%. 2: the rate of groin hernia surgery was 17 per 100 000 population. A herniorrhaphy costed 60 USD to perform. 3: No significant differences in terms of recurrence rates, post operative complications and patient satisfaction were demonstrated between the patients operated in the mosquito mesh and the commercial mesh groups. Cost-effectiveness was very high for both materials but total cost favours the mosquito mesh.

Conclusion There is a vast unmet need for groin hernia surgery. Cost of surgery compares favourably with other health care interventions. A superior technique can be used in groin hernia surgery at low cost, with high cost-effectiveness in a Low Income Country.

Keywords
Global surgery, groin hernia, groin hernia surgery, hernia epidemiology, low cost surgery, cost-effectiveness